

## AMENDMENT TO THE SPECIFICATION:

Please amend the paragraph in the specification on Page 8, line 20 through page 9, line 17 as follows:

Figure 2 illustrates an apparatus in the form of a pre-thickener 10 according to one preferred embodiment of the invention. ~~Said The apparatus, or, when located in the application of Fig. 1, a pre-thickener 10~~ 10, comprises an essentially elongated outer casing 12, the first end of which is closed with an end plate 14 and to the first end of which an inlet conduit 18 for fiber suspension to be treated  $P_{in}$  is arranged. ~~Said The~~ inlet conduit 18 may be coming either, as shown in the figure, from beside the apparatus or from the end of the apparatus, in the axial direction. The inlet conduit 18 may also be radial, tangential or a combination thereof. The other end of outer casing 12 is closed with an end plate 16 and to ~~said the~~ other end there is arranged an outlet conduit 20 for thickened fiber suspension  $P_{out}$  being discharged from the apparatus. Just like the inlet conduit, the outlet conduit 20 may also be extending radially or tangentially to beside the apparatus or extending axially outwards from the end of the apparatus. The outer casing 12 is further provided with an outlet conduit 26 for the filtrate  ~~$F_{out}$~~  Inside F. Inside the outer casing 12, essentially at least between the inlet conduit 18 and the outlet conduit 20, there is arranged a filter surface 22 ~~which arranged. The filter surface 22~~ preferably has a round cross-section. Bearings 28 are arranged at the end plates 14 and 16 of the apparatus 10 or in their vicinity, which bearings support a shaft 30. The shaft 30 is preferably driven by an electric motor, the rotational speed of which is either adjusted to be correct by means of a reduction gear or the rotational speed of which may be regulated by means of an inverter. At least one screw thread 32 is fixed

on the shaft 30 so that the thread, according to a preferred embodiment, is positioned centrally inside the filter surface 22 and extends essentially throughout the whole length of the filter surface. In some cases, there may be several screw threads arranged inside each other. The screw thread 32 according to the invention is characterized in that it is positioned via tie rods at a distance from its shaft 30. ~~There are valves~~ Valves 40 and 46 are arranged in connection with both the outlet conduit 20 for the thickened pulp and the outlet conduit 26 for the filtrate in order to regulate the functioning of the apparatus.

Please amend the paragraph in the specification on Page 10, lines 14-19 as follows:

~~Figure 2 illustrates further a~~ A so-called scrap trap 50 (not shown) may be arranged at the feeding end of the pre-thickener apparatus 10. In ~~At its simplest form, the scrap trap may be~~ it is a tangential conduit arranged at the end of the apparatus, through which conduit heavy particles collected into the apparatus may be discharged continuously or periodically. The conduit may e.g. be provided with means known per se in order to separate and remove scrap from the apparatus, if desired.

Please amend the paragraph in the specification on Page 12, lines 15-25 as follows:

The filter surface 22 is aided to keep open, as mentioned earlier, by means of a shaft 30 having mechanical member 30, 32, preferably a screw, both of its ends ~~of which are~~ mounted on bearings 28 to the end

plates 14 and 16 of the apparatus and at least one screw thread 32 fixed to the shaft 30. However, in some applications a construction mounted on bearings at the drive end only may be used. The thread/s 32 of the screw is/are arranged at such a distance from the filter surface 22 that the thread/s wipe/s away the thickened pulp from the filter surface and lead/s the thickened material to the discharge without letting the thickened pulp to rotate with the screw. An appropriate distance is under 5 mm, preferably under 3 mm and suitably 0.2 – 2 mm from the filter surface. In other words, the screw rotates so that it prevents the formation of a permanent pulp layer, a so-called precoat, on the filter surface 22.

Please amend the paragraph in the specification on Page 13, lines 1-18 as follows:

The number of screw threads 32 (except for one thread, there may be two or more threads inside each other) and their pitch as well the rotational speed of the screw are selected so that the desired optimal mat formation, i.e. thickening is obtained for each type of pulp. Practice has shown that when using the apparatus used in our tests, the residence time of the fiber suspension in the apparatus should be less than five seconds, because after that no significant thickening occurred with the apparatus used in our tests. It is possible, however, to achieve though, that by ~~significantly modifying the apparatus we used, it is possible to utilize~~ even longer residence times by significantly modifying the apparatus used in the test. In that case, the constructional characteristics and/or the rotational speed of the screw are selected so that the feeding speed created by the screw (to put it more exactly, the lift speed, if the apparatus is vertical) is less than 3 m/s, preferably between 0.2 – 1.0 m/s and most preferably

about 0.5 m/s. Nevertheless, this is not the actual pulp feed, because the screw does not feed the pulp totally through the apparatus, but only pushes the part of pulp thickened onto the filter surface to the discharge opening of the apparatus. Factors limiting said feeding speed are, e.g., the filtrating speed of the liquid off the fiber suspension and the generation of turbulence between the fiber mat and the filter surface.